

REMARKS

In the outstanding final Office Action¹, the Examiner rejected Claims 1-15 and 23 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,583,934 to Kramer (“Kramer”).

By this amendment, Applicants propose amending claims 1 and 23 to more appropriately define the claimed invention. Claims 1-15 and 23 remain pending in this application..

I. Claim Rejections Under 35 U.S.C. §103(a)

Applicants respectfully traverse the rejection of claims 1-15 and 23 under 35 U.S.C. § 103(a) on the ground that the Examiner cannot establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP § 2142, 8th Ed., Rev. 5 (August 2006). Moreover, “in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.”

USPTO Memorandum from Margaret A. Focarino, Deputy Commissioner of Patent Operations, May 3, 2007, page 2.

A *prima facie* case of obviousness cannot be established for at least the reason that Kramer, whether taken alone or in combination, fails to teach or suggest every element recited in the claims.

A. Claims 1-15

¹ The Office Action contains statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

For example, Kramer fails to teach or suggest a combination including “the diffraction grating integrally formed on an external surface of the first section and an external surface of the single molded piece,” as recited in claim 1 (emphasis added). In the Office Action, the Examiner first asserts that Kramer teaches or suggests this element, stating “Kramer teaches … the diffraction grating 15 *integrally formed on an external surface of the first section (shown in fig. 1) of the single molded piece.*” Office Action, page 3 (emphasis in original). However, to provide support for this assertion, the Examiner then states “shown in fig. 1, item diffraction grating 15 integrally formed in the first section” Office Action, pages 3-4 (emphasis added). That is, the Examiner specifically asserts that diffraction grating 15 is integrally formed in the first section, not on an external surface of that which the Examiner has characterized as constituting Applicant’s claimed “first section,” thus contradicting his earlier assertion. Accordingly, by the Examiner’s own admission, Kramer fails to teach or suggest a combination including “the diffraction grating integrally formed on an external surface of the first section and an external surface of the single molded piece,” as recited in claim 1 (emphasis added).

Regardless of the Examiner’s statements, for at least the following reasons, Kramer fails to teach or suggest such a combination. Kramer teaches an optical wavelength selection apparatus, which may be used as a demultiplexer. Kramer, col. 19, lines 28-31. The apparatus 80 (see Figures 5 or 6, both containing apparatus 80 in housing 100) comprises a plurality of components, including diffraction grating 10 (which includes surface-relief grating 15, *see Kramer*, col. 3, lines 61-64), housing 100, and detector array 94. Diffraction grating 10 is produced from photoresist deposited on a substrate. Kramer, col. 7, lines 46-57. Diffraction grating is then incorporated into apparatus 80 and enclosed in housing 100, wherein all elements may be sealed together using epoxy or other similar sealant. Kramer, col. 13, lines 31-35; col. 6,

lines 19-22; col. 19, lines 3-9; col. 20, lines 13-20. This is further illustrated in Figures 5 or 6, wherein diffraction grating 10 is illustrated as being fully enclosed within housing 100. The Examiner, on page 3 of the Office Action, asserts that housing 100 constitutes Applicants' claimed "single molded piece," stating "the sections are integrally formed as a single piece in a housing 100." Even if housing 100 of Kramer can be reasonably construed as corresponding to Applicants' claimed "single molded piece," because diffraction grating 10 is enclosed in housing 100, Kramer cannot teach or suggest a combination including "the diffraction grating integrally formed on an external surface of the first section and an external surface of the single molded piece," as recited in claim 1 (emphasis added). Accordingly, a *prima facie* case of obviousness cannot be established for at least this reason.

Moreover, Kramer explicitly discloses that an "object of this invention [is] to have such improved surface-relief transmission grating surface be encapsulated and, thereby protect the grating surface from being damaged due to handling and cleaning of the grating element." Kramer, col. 2, lines 38-41 (emphasis added). Kramer thus not only teaches that diffraction grating element 10 is encapsulated, and not on an external surface of housing 100, but also teaches away from such a combination. A *prima facie* case of obviousness cannot be established for this additional reason.

Kramer also fails to teach or suggest a combination including at least "a single molded piece comprising an integrated first section, second section, third section, and diffraction grating," as recited in amended claim 1.

At page 5 of the Office Action, the Examiner repeats his assertion that:

[t]he examiner does not give patentable weight to the limitation '**molded**' since the word 'molded' implies that the above demultiplexer [sic] was made through molding process ... the

presence of process limitations on product claims. which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product. Emphasis in original

Applicant continues to disagree with the Examiner's assertion. With respect to the "single molded piece comprising an integrated first section, second section, third section, and diffraction grating," as recited in amended claim 1, Applicant reiterates that MPEP § 2113 specifically states:

[t]he structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product ... terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" **are capable of constructions as structural limitations**. MPEP § 2113, 8th Ed., Rev. 5 (August 2006) (emphasis added).

That is, the MPEP specifically provides that terms "where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product," can be interpreted as structural limitations and be given their proper patentable weight in a product claim. *Id.*

Here, the term "single molded piece" as recited in claim 1 imparts clear structural limitations on the claimed "demultiplexer." That is, claim 1 recites a "demultiplexer comprising: a single molded piece... ." Accordingly, if the prior art fails to teach or suggest a "demultiplexer comprising a single molded piece ...," as recited in claim 1, the prior art can neither anticipate nor render obvious claim 1.

The Examiner, however, further maintains his assertion that the MPEP "affirms the examiner's standing in the issue that the above demultiplexer [of Kramer] is entirely integrated

as one single unit having a single piece that as stated above includes all contended limitations as claimed." Office Action, page 9 (emphasis in original). Applicant continues to disagree with the Examiner's assertion, as Kramer fails to teach or suggest at least "a single molded piece," as recited in claim 1 (emphasis added). Here, the term "single molded piece," describes a product comprised of a single piece which can only be made by the process of molding. Furthermore, the term "molded," imparts a distinctive structural characteristic to the final product, such as the terms "welded," "press fitted," and " etched," and should be construed as a structural limitation, as provided for in the above quoted section of the MPEP.

The Examiner acknowledges that Kramer fails to teach or suggest at least this element, stating "Kramer ... does not specifically teach wherein the above single piece [is] a molded single piece." Office Action, page 4. Moreover, the Examiner does not provide any teaching or suggestion for curing this deficiency of Kramer. Accordingly, Kramer fails to teach or suggest at least "a single molded piece," as recited in claim 1, and a *prima facie* case of obviousness cannot be established for this reason also. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 under 35 U.S.C. § 103(a).

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Claims 2-15 depend from independent claim 1, and thus require all of the elements of claim 1. Since Kramer fails to teach or suggest each and every element of claim 1, that reference also fails to teach or suggest each and every element required by the dependent claims. Accordingly, Applicant respectfully requests that the rejection of claims 2-15 under 35 U.S.C. § 103(a) be withdrawn.

B. Claim 23

Claim 23, although of different scope, recites elements similar to those recited in claim 1.

For example, claim 23 recites a combination including “diffraction means is on an external surface of the means for separating and an external surface of the molded single piece component” (emphasis added). As discussed above, Kramer fails to teach or suggest at least this feature. Accordingly, at least for the reasons given above with respect to claim 1, a *prima facie* case of obviousness cannot be established with respect to claim 23. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claim 23 under 35 U.S.C. § 103(a).

II. Conclusion

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-15 and 23 in condition for allowance. Applicants submit that the proposed amendments of claims 1 and 23 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is not rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 20, 2007

By: 

Gary J. Edwards
Reg. No. 41,008

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